

320069

JPRS 81745

10 September 1982

Worldwide Report

ENVIRONMENTAL QUALITY

No. 368

19981203 060

FBIS

FOREIGN BROADCAST INFORMATION SERVICE

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

DTIC QUALITY INSPECTED 3

6
60
A04

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

10 September 1982

WORLDWIDE REPORT
ENVIRONMENTAL QUALITY

No. 368

CONTENTS

ASIA

AUSTRALIA

Proposed Staff Cuts in NSW Environmental Body Assessed (Joseph Glascott; THE SYDNEY MORNING HERALD, 17 Jul 82)	1
Federal Government To Retain Control of Air Pollution Station (Jane Ford; THE AUSTRALIAN, 19 Jul 82)	3
WA Environmental Impact Study Program Costs Millions (THE WEST AUSTRALIAN, 12 Jul 82)	4
Growth of New Industry, by Janet Wainwright Power of EPA	
State Pays Growers for Destroying Apple Trees (Michael Zekulich; THE WEST AUSTRALIAN, 17 Jul 82).....	6
Du Pont Ammonium Nitrate Plant Meets Resistance (Ian Bushnell; THE COURIER-MAIL, 13 Jul 82)	7
NSW Antipollution Laws Raise Oil Company Objections (THE AUSTRALIAN, 5 Jul 82)	9
Briefs	
Environmental Watchdog Group	10
Alp Dam Position	10
Volcanic Ash Dispersal	11
EPA Shift in Victoria	11
Reforestation Program	11

LATIN AMERICA

CUBA

Improvements in Lobster Harvest Since 1978 Noted (MAR Y PESCA, Apr 82)	12
---------------------------------------------------------------------------------	----

NEAR EAST AND NORTH AFRICA

UNITED ARAB EMIRATES

Briefs Afforestation Project Progressing	14
---------------------------------------------	----

SUB-SAHARAN AFRICA

BOTSWANA

Shashe Dam To Supply Water to Francistown (Solomon Lotshe; DAILY NEWS, 15 Jul 82)	15
Drought Relief Projects Approved (Tarcisius Modongo; DAILY NEWS, 15 Jul 82)	16
Briefs Ditlharapeng Water Shortage	17
Makaleng Hit by Thirst	17
Bobirwa Drought Relief	18

ETHIOPIA

Forest Development Gains Momentum in Tigray (THE ETHIOPIAN HERALD, 19 Aug 82)	19
Briefs Seven Million Tree Seedlings	20

NAMIBIA

Briefs Clouds 'Milked'	21
---------------------------	----

NIGERIA

Briefs Desert Encroachment Causes Migration	22
------------------------------------------------	----

SOUTH AFRICA

Northern Transvaal Ravaged by Drought (Pamela Kleinot; THE STAR, 4 Aug 82)	23
-------------------------------------------------------------------------------------	----

Fears of Ruin as Drought Grips Natal Reported (Tim Clarke; THE CITIZEN, 17 Aug 82)	25
SWAZILAND	
Water Imported From Neighboring Countries (Donny Nxumalo; THE TIMES OF SWAZILAND, 10 Aug 82).....	26
WFP Aid To Drought-Stricken Families Reported (James Dlamini; THE TIMES OF SWAZILAND, 9 Aug 82).....	27
SYRIA	
Pollution Study in Homs (Rasim al-Wa'ri; AL-THAWRAH, 17 Jul 82).....	29
ZIMBABWE	
Minister Reassures People on Drought (THE SUNDAY MAIL, 22 Aug 82)	32
Government To Establish Village Water Supply Centers (THE HERALD, 4 Aug 82)	34
Squatters Flock to Chinamhora Water Project (THE HERALD, 7 Aug 82)	35
Pakistani Aid for Drought-Stricken Communal Lands Reported (THE HERALD, 16 Aug 82)	36
Shumba Irrigation Scheme, Power Systems Reported (THE HERALD, 7 Aug 82)	37
Briefs	
Drought Disaster Averted	38
Drought Aid	38
WEST EUROPE	
FINLAND	
Find of Illegally-Dumped Chemicals Off Turku Causes Concern (HELSINGIN SANOMAT, 25 Jul 82)	39
Search for More Barrels, by Harri Nykanen Hazardous Waste Disposal Problem in Many Areas, by Sauli Korpimo	

EDF To Study Power Plant Impact on Environment (LE MATIN, 4 Aug 82)	49
------------------------------------------------------------------------------	----

GREECE

Scientists Charge Pollution Data Altered (ELEVTHEROTYPIA, 2 Jul 82)	51
Commentary on Pollution Causes (Editorial; ELEVTHEROS KOSMOS, 24 Jun 82).....	53

PROPOSED STAFF CUTS IN NSW ENVIRONMENTAL BODY ASSESSED

Sydney THE SYDNEY MORNING HERALD in English 17 Jul 82 p 3

[Article by Joseph Glascott]

[Text]

Cuts in staff in the environment protection division of the Environment and Planning Department could delay assessment of environmental impact statements for major coal and industrial projects, conservation groups claimed yesterday.

The groups fear that the cuts will weaken the effectiveness of the division as a protection agency.

The cuts were announced by the director of the department, Mr R. B. Smyth, in notice to all staff on Thursday.

He said the Government task force committee (the Stevens committee) recently had imposed a staff limit of 495 for the department.

As far as he could learn, all government departments had been cut by about 5 per cent. This meant that the Environment and Planning Department had to cut its staff by 27.

A departmental review committee would recommend how these cuts would be made. The environment protection division and the research and services division would be the main areas affected.

Both would be subject to review with their functions and workloads being rationalised.

The review was likely to lead to a spill of most, if not all, of the positions in those two divisions.

As far as possible the staff reduction would be achieved by natural wastage and adjustment to the structures of the divisions.

But not all the reduction could be achieved by this means and staff occupying surplus positions

would be redeployed through the processes set up by the Public Service Board.

The senior vice-president of the National Trust, Mr Clive Lucas, said the proposed changes in the division was an outrageous decision.

"If the Minister, Mr Bedford, has approved of this he is not acting on good advice. The Wran Government has so far been seen by many as an enlightened Government on conservation."

The deputy director of the Total Environment Centre, Mr Jeff Angel, said: "We object to any diminution of staff and resources which could lead to a reduction in environment impact assessment, and public review of potentially damaging projects."

"The environment protection division has been one of the most effective protection agencies in the State."

"The Wran Government came to power with wide support from community groups who demanded information and public review of development projects."

The executive secretary of the National Parks Association, Mr Peter Prineas, said he was "most concerned by this proposal."

"The environment protection division was not earmarked for cost cutting by the task force committee, yet the director has taken it upon himself to extend the exercise to a vital area of Government administration."

Mr Smyth said yesterday the functions and effectiveness of the division would not be reduced by the rationalisation. All areas in the department would have pro-rata staff reductions.

He said the environment protection division was one of the biggest divisions in the department, and assessment work was "rather quiet" at present.

If the resources boom picked up again the division could be increased in strength.

Mr Smyth said other divisions of the department also carried out environmental assessment work.

The environment protection division has a staff of 62 and is headed by Mr John Whitehouse, formerly senior adviser to the former Minister for Planning and Environment, Mr Landa.

The division oversees the preparation of environmental impact statements for major developments such as mines, power stations, transmission lines, refineries, aluminium smelters and other industries.

The division also services the Heritage Council and the NSW Coastal Council.

CSO: 5000/7561

FEDERAL GOVERNMENT TO RETAIN CONTROL OF AIR POLLUTION STATION

Canberra THE AUSTRALIAN in English 19 Jul 82 p 2

[Article by Jane Ford]

[Text]

THE Federal Government will disregard a Razor Gang recommendation affecting Australia's international scientific standing — a plan to contract out the work of an important air pollution monitoring station.

This follows months of lobbying by scientists as well as strong criticism from a Senate inquiry. All maintained it was inappropriate for the work of the station, at Cape Grim, Tasmania, to be handed over to private enterprise.

Now only basic operating work will be contracted out, leaving research and development, or about 70 per cent of the station's work, in the hands of the CSIRO and the Department of Science and Technology.

The \$1 million station, officially opened in December, is part of a global network of stations monitoring air pollution, set up with the support of the United States.

The aim is to keep a long-term watch on rising levels of pollutants such as fluorocarbons, carbon dioxide and oxides of nitrogen and sulphur.

At present there are five stations — at the South Pole, Samoa, Hawaii, Alaska and Cape Grim — all controlled by government agencies.

Two more are being developed in Japan and Ascension Island and three others are planned in the US, Canada and West Germany. These will also be under government control.

Opposition

Scientists from the CSIRO's

Division of Atmospheric Physics, who have been closely involved in the development of the Cape Grim station, were concerned that if it passed to private enterprise the extensive monitoring would be downgraded to check only carbon dioxide, the research work dropped and the facility turned into a mere data gathering point.

Expressions of interest in operating the station were called for at the end of last year. However, the Government agreed to reverse the decision after pressure from the CSIRO, the Department of Science and Technology, Academy of Science, and the Senate Standing Committee on Science and the Environment.

The Senate committee's inquiry revealed that no money would be saved by the move, there were no technical advantages and the number of departmental staff would be cut by only four.

Last financial year the operational cost of the station was about \$200,000. This year the cost is expected to rise to more than \$300,000 because the Government will have to pay the contractor enough to allow for some profit.

Dr Graeme Pearman, of the CSIRO, said he believed the new arrangements would allow top quality research to continue at Cape Grim.

The station had already shown significant results, including evidence that the levels of methane and methyl chloroform, an industrial cleaning agent, were rising.

WA ENVIRONMENTAL IMPACT STUDY PROGRAM COSTS MILLIONS

Growth of New Industry

Perth THE WEST AUSTRALIAN in English 12 Jul 82 p 23

[Article by Janet Wainwright]

[Text]

INCREASING environmental awareness in WA has spawned a major growth industry worth millions of dollars.

Environmental review and management programmes for relatively small sub-divisions to major developments, each costing hundreds of thousands of dollars, are being compiled by town planners.

There seems to be an obvious need to streamline the system, which is costly and frequently duplicates information.

The acting Minister for Conservation and the Environment Mr Masters, says that it is still a relatively new area but the Department of Conservation and the Environment is collating information and putting this into a computer system.

He said he believed that the proliferation of consultants would also sort itself out as the "fly-by-nights" in the new industry dropped out.

He could see no alternative to the developers appointing their own consultants and producing their own reports, though these could be suspect.

The department did

not have the resources to do the environmental planning studies and he could not envisage a system where the Government appointed consultants and charged the developers.

One consultant company alone, Scott and Furphy, has grown from one person to a staff of 38 in 12 years.

In common with other consultants, they also draw from a rash of specialists in other scientific areas.

From an original base, concerned with the impact of mining and industry on WA's environment, it is now quite common for developers to be called on to do environmental studies.

The ultimate cost of these studies, whether they be for housing, roads or rubbish sites, is borne by the public, either through increased land costs or rates and taxes.

Many of the reports are treated with suspicion by the conservationists they are intended to placate because they are paid for by the developers.

Preferable

Both the Department of Conservation and the Environment and the consultants agree

that the system is far from perfect, but say that it is the best available and is preferable to the planning that existed before environmental awareness.

The environmental process is so powerful that it cuts across all town-planning laws.

The Mandurah area is a prime example of duplication.

Three environmental studies have been released recently for three different canal projects, two in Mandurah and another in the neighbouring shire of Murray.

A study for the Parry's Esplanade Halls Head proposal is estimated to have cost \$300,000 so far, with no guarantee that the land will even be rezoned.

The principal consultants are Feilman Planning Consultants, who are also the pro-

ject planners.

Reports for the John Holland project, on the opposite side of the coast road to the Parry's development, and a further report for a canal development at Yunderup were both made by Russell Taylor and William Burrell.

These reports are estimated to have cost \$200,000 each.

Pooled

Mr Burrell says that if information had been pooled when environmental studies first began there would now be a considerable amount of information to draw on.

The department has a list of 20 consultants which it will give to a developer.

The consultants are those willing to go on to a list or who have done studies for the department.

Power of EPA

Perth THE WEST AUSTRALIAN in English 12 Jul 82 p 23

[Text]

THE Environmental Protection Authority can effectively recommend that any development is subject to environmental assessment.

The three-man authority, headed by Professor Bert Maine, of the University of WA, with Professor Des O'Connor, of Murdoch University, and Mr Athol Gibson as members, advises the Government.

The Department of

Conservation and the Environment is the body which carries out the recommendations and advises the developers of the need for environmental reports.

But according to its assistant director, Mr Peter Browne-Cooper, it has no power to enforce the recommendations of a report and virtually relies on a gentleman's agreement with the developer or a vigilant local authority.

CSO: 5000/7560

STATE PAYS GROWERS FOR DESTROYING APPLE TREES

Perth THE WEST AUSTRALIAN in English 17 Jul 82 p 7

[Article by Michael Zekulich]

[Text]

MORE than 63,500 apple trees have been ripped out by WA fruitgrowers in the past year.

The fruitgrowers were paid \$416,419 by the Commonwealth and State Governments to pull out the trees.

About 40,000 more trees are expected to come out—with a \$250,000 payout—this financial year.

Some of the trees are old, but many are in prime producing condition.

The pulling out of the trees is part of an industry rationalising scheme aimed at cutting back production to reduce exports to uneconomic markets—like Britain and Europe.

So far, 99 growers have pulled out trees which represent about 8 per cent of the State's orchard.

The production involved would be more than 200,000 boxes of apples.

Some fruitgrowers have received as much as \$20,000 with payments varying from \$4

to \$10 a tree.

Many of the trees were in the Manjimup, Donnybrook and Bridgetown areas.

Growers are looking at alternative crops and grazing.

"It was hard at first," said Mullalyup grower John Dell'Agostino (36).

"We have grown these trees from the beginning."

"But it does not pay to keep them."

Mr Henry Gubler, president of the WA Fruitgrowers Association, said it was hoped the scheme could get the industry back on its feet.

He said some good orchards were now being pulled out.

"The only exports markets that were economic last season were in South East Asian."

"I believe we have seen the end of the traditional European area for WA apples."

The Minister for Primary Industry, Mr Old, said that pulling out trees was a traumatic experience for those concerned.

DU PONT AMMONIUM NITRATE PLANT MEETS RESISTANCE

Brisbane THE COURIER-MAIL in English 13 Jul 82 p 23

[Article by Ian Bushnell]

[Excerpts]

Du Pont or not Du Pont — that is the question for Toowoomba.

Last December, Toowoomba was chosen by Du Pont (Australia) Ltd — a part of the giant US based Du Pont Corporation — as the site of a \$40-million ammonium nitrate plant which would supply industrial explosives to the central Queensland coal-fields.

When the company applied to the City Council to have its 33 ha site in the city's expanding north-west suburbs rezoned from rural to noxious industry, only six objections were lodged.

It was a slow fuse. Toowoomba these days is covered in anti-Du Pont graffiti, motor vehicles sport bumper stickers declaring "Don't Du Pont Toowoomba," and the daily news columns are full of claims and counter-claims about the safety of the proposed plant in what has become a classic debate of the environment versus progress.

Central to this debate has been the work of the Citizens for Clean Air organisation which has proved itself to be a highly efficient and well funded campaigner against Du Pont.

Du Pont says no more than it has to, preferring to maintain re-assuring line, emphasising its "proud" safety record and the benefits it will bring to the 70,000 strong community, while it and the City Council await the findings of the environmental impact study.

According to Du Pont project coordinator Albert E. Dunklee, the plant will employ 90 people, pay an annual wages bill of \$2 million and

spend \$1 million a year on goods and services.

The plant would begin production in 1985 and manufacture 200 tonnes of ammonium nitrate a day to truck west through Dalby to central Queensland.

The ammonium nitrate prills or granules would need further treatment there before being explosive.

In May, ICI Australia Ltd and Consolidated Fertilizers Ltd announced plans to build a \$100 million explosives plant at Gibson Island in Brisbane to meet the demand in eastern Australia to 1990 and beyond.

Toowoomba meets all the requirements for such a plant.

It has natural gas, the raw material of the manufacturing process, from the Roma-Brisbane pipeline which is in the immediate vicinity of the site, an adequate water and power supply, a road and rail network, a well developed infrastructure and proximity to the market place.

However, it is the location of the Du Pont site which worries Toowoomba residents and environmentalists.

In a letter to the Toowoomba Tourism and Development board, Du Pont project manager R.E. Brakewell listed what gaseous emissions there would be from the plant — water vapour, hydrogen, carbon dioxide, and small quantities of nitrogen oxides, as well as a small amount of fallout dust from the prilling tower.

The site, although adjacent to a tannery and the Wetalla sewage works, is only six kilometres from

the city centre and close to new residential areas and Baillie Henderson Hospital.

The Citizens for Clean Air fear that gas emissions, some of them they claim to be cancer causing, and dust fallout will foul Toowoomba's air and turn the Garden City — it holds a Carnival of Flowers every year — into the "Noxious City."

Spokesman Arne Pedersen says 70 to 80 percent of all Toowoomba residents would be living within a radius of the plant's chimneys.

Du Pont has promised to comply with all the requirements of the Clean Air Act but, according to the Citizens for Clean Air, it offers no protection.

CCA president Don Graham told a City Council meeting that in the 19 years since the Act was passed there had been only four prosecutions and a total of only \$200 in fines imposed after appeals.

The Du Pont issue cuts across party political lines.

One Liberal Party branch, after lengthy debate, sent a protest motion against any re-zoning of land close to residential areas for noxious indus-

try to the City Council, the Premier, Deputy Premier and the Local Government Minister.

The local National Party has moved that the plant not be allowed in the proposed area inside the city boundaries.

ALP candidate for Toowoomba North, Alderman Peter Wood, like all Council members, is officially waiting to see the EIS before passing judgement, but it would be electoral

The site is also in a mountain valley which runs through the middle of the city and is prone to fogs.

Mr Graham says fog, mixed with nitrogen oxide emissions, would produce nitric acid.

The CCA criticised the environmental impact study guidelines prepared by the Department of Commercial and Industrial Development for omitting reference to fog, the risk of explosion and the hazards posed to human health.

At a cost of \$3000, it has ordered its own EIS to be carried out by the School of Environmental Studies at Griffith University.

It should be ready by the end of the month.

CSO: 5000/7560

NSW ANTIPOLLUTION LAWS RAISE OIL COMPANY OBJECTIONS

Canberra THE AUSTRALIAN in English 5 Jul 82 p 2

[Text]

OIL companies claim that new clean-air laws in NSW will cost the industry up to \$20 million in increased operating expenses and could have a substantial effect on the its future in the State.

NSW refiners have been fighting the State Government over the low petrol-pricing levels and strict regulatory standards imposed on the industry.

One of the main operators in NSW, Total, revealed this year that it lost money on petrol it sold in the State.

The company's expansion plans for NSW have been shelved indefinitely, while Caltex has protested against the Government's pricing policies and Ampol has described the behavior of the NSW Government as "outrageous interference with the democratic process".

The cost of compliance with the new regulations, which are expected to reduce the hydrocarbon fumes that form 7 to 8 per cent of the air pollution above Sydney, has been calculated at between \$18 and \$20 million.

The increase in operating costs is expected to be passed to the public in the price of petroleum products.

The laws, to be introduced over the next three years, require petrol storage and handling facilities within three

zones covering Sydney, Newcastle and Wollongong to be modified to prevent vapor leaking into the atmosphere.

Similar laws are now being considered for Victoria.

The NSW regulations call for all new road tanker filling terminals and main storage tanks to be fitted with vapor emission control equipment, and for existing storage tanks to be fitted with similar facilities by 1984.

Smaller storage tanks in Sydney will also be covered by the new laws from 1985 onwards, while emission control systems will be required at all main stages in the transportation of fuel from refineries to individual service stations.

The requirement that all service stations should have new petrol pump nozzles with an automatic cut-off valve — or face a penalty of up to \$5000 — is likely to raise an outcry among service station owners.

Many of the oil companies have already begun the switch-over to the new standards, with Caltex embarking on a \$3 million conversion program.

The most sophisticated vapor recovery system yet installed, at a cost of \$300,000, is a unit at the Silverwater terminal in Sydney's western suburbs that prevents all leakage of fumes.

CSO: 5000/7559

BRIEFS

ENVIRONMENTAL WATCHDOG GROUP--Queensland lawyers have formed a new environmental watchdog group, the Queensland Environmental Law Association. It is the third such association of lawyers to be formed in Australia in the last three years. The other groups are in New South Wales and Victoria. Chairman of the Queensland group, which has formed a committee to draw up a constitution and articles of association, is Brisbane solicitor Mr Stephen Keim. The Queensland Conservation Council chairman, Mr Jason Reynolds, of Brisbane, said yesterday that the new association would assist conservation groups to protect areas of Queensland, such as Moreton and Fraser Islands. [Brisbane THE COURIER-MAIL in English 7 Jul 82 p 12]

ALP DAM POSITION--Conservationist groups yesterday praised the Labor conference's decision to oppose the flooding of the Franklin River in south-west Tasmania. Against the strong opposition of its Tasmanian delegates, the conference voted to oppose the construction of any dam on the Franklin or Gordon rivers. The result was described as magnificent by the director of the Tasmanian Wilderness Society, Dr Bob Brown. It was a challenge to the Fraser Government to intervene in Tasmania to stop bulldozers being sent into the wilderness this spring, he said. The Australian Conservation Foundation said it was heartening that a political party accepted the need for the Federal Government to save an area of world heritage importance which was listed on the National Estate Register. The successful motion, moved by the Opposition Leader, in the Senate, Senator Button, also committed a Labor Government to help the Tasmanian Government expand its tourist potential. Tasmania would also be helped to find ways to diversify its electricity generation. Senator Button's predecessor as Senate Labor Leader, Mr Ken Wriedt, failed in his attempt to have the conference approve the dam scheme. Mr Wriedt, now Leader of the Opposition in the Tasmanian Parliament, urged the conference to recognise that Tasmanians had approved the scheme in a referendum. Labor's spokesman on the environment, Mr West, failed by one vote to have the conference support a public inquiry into the scheme. [Melbourne THE AGE in English 9 Jul 82 p 17]

VOLCANIC ASH DISPERSAL--ANOTHER cloud of volcanic ash is dispersing off the north-west coast of WA after an eruption of Mount Galunggung, south of Jakarta, on Thursday night. The Bureau of Meteorology said that the eruption at about 8pm was followed by a smaller one at about midnight. The volcanic activity was shown on satellite photographs. The ash cloud from an earlier eruption that disabled a Singapore Airlines jumbo jet could not longer be seen on the photographs a bureau spokesman said. Staff were puzzled about the origin of the present cloud, which appeared to come from a point a few kilometres east of Mount Galunggung. "We are not too sure, but it could be a different volcano --or maybe it has a double crater," the spokesman said. The regional director of the Aviation Department, Mr E Keil, said that aircraft were being diverted around the ash clouds. "We think we have the matter under control," he said. The bureau would continue to monitor the clouds and advise the department of their position and density. [Text] [Perth THE WEST AUSTRALIAN in English 17 Jul 82 p 7]

EPA SHIFT IN VICTORIA--Control of the Environment Protection Authority may be transferred from the Ministry of Conservation to the Department of Planning. Dr Gerard Vaughan, a member of the Caucus Conservation Committee, said yesterday the move was one of the options being considered by the Ministry of Conservation review team. Speaking at a meeting of the Clean Air Society, Dr Vaughan said the review team had queried whether the EPA rightly belonged with a Ministry whose main function was "the control of Crown lands." He said the Department of Planning seemed more appropriate, given the EPA's responsibility for environmental management and planning. The Minister for Conservation and Planning, Evan Walker, was unavailable for comment, but his senior adviser, Dr Michael Henry, denied there were definite plans to shift control of the EPA to the Department of Planning. "We are simply looking at a general review of the Ministry," he said. [Melbourne THE AGE in English 14 Jul 82 p 22]

REFORESTATION PROGRAM--MORE than 11,000 trees will be planted on State Energy Commission properties in the next year. About 10,000 of the trees will be planted on a former grazing property near Collie, one of three properties acquired by the SEC as part of a reforestation programme in the Wellington Dam catchment area. About 70,000 trees have been planted on the properties to help stabilise soil and reduce the salinity of run-off water into the dam. Other major plantings proposed by the SEC include 500 trees and shrubs at the Muja power station, 350 trees at Kwinana power station and 100 trees at the Bunbury station. [Perth THE WEST AUSTRALIAN in English 15 Jul 82 p 14]

CSO: 5000/7560

IMPROVEMENTS IN LOBSTER HARVEST SINCE 1978 NOTED

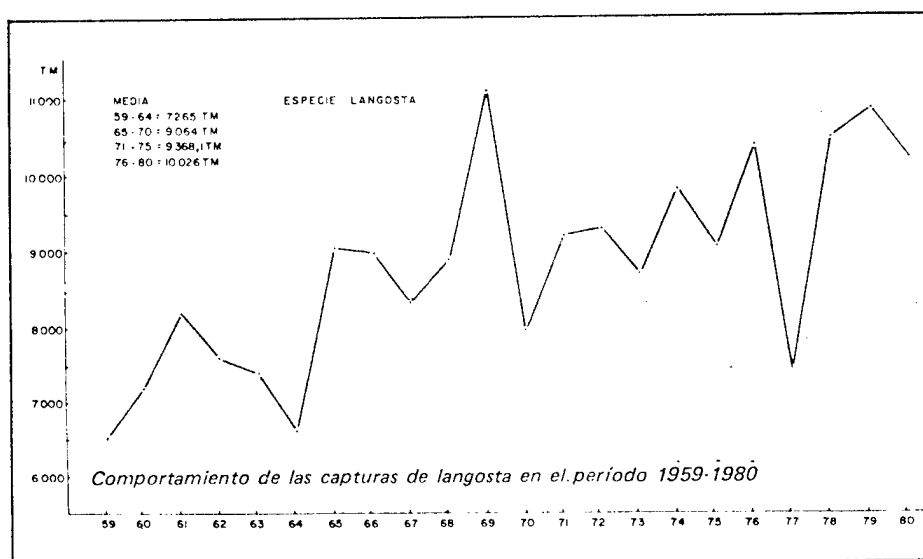
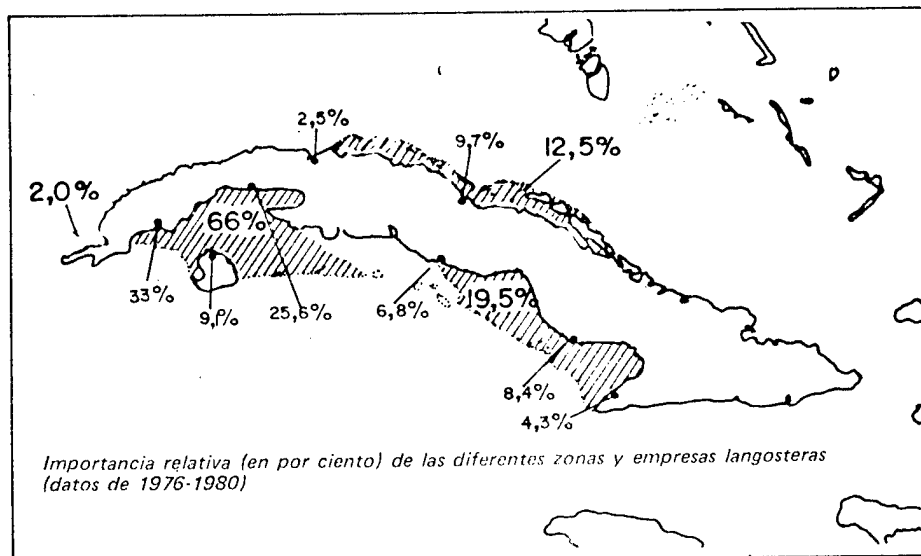
Havana MAR Y PESCA in Spanish Apr 82 p 25

[Text] Lobster is harvested in Cuba on the four large insular shelves which surround the island. The importance of each of these is shown in the map below. Most of the lobster production is located to the south (almost 80 percent), especially in Batabano Gulf.

The development of the lobster harvest from 1959 to 1980, which has varied, is shown in the graph. Since 1965, when over 9,000 metric tons per year were caught, the harvest of this specie has fluctuated often, with sudden drops every third or fourth year and showing levels of less than 8,800 metric tons in 1967, 1970, 1973 and 1977, and especially following years with high harvests, as in 1969 and 1976.

Beginning in 1978 this situation has changed completely and the harvests have been kept at stable levels and above 10,000 metric tons per year. This of course was determined from the application of a fishing administration policy, particularly with regard to a more strict compliance with the minimum legal size and an increase in the closed season as well as the complete watch over this period. All of this has contributed in making the yearly weight increase of the harvestable population be estimated at around 700 metric tons.

[Photos on following page]



Captions:

1. Map--Relative importance (percent) of the various zones and lobster enterprises. (information from 1976-1980)
2. Graph--Behavior of the lobster harvest over the 1959-1980 period.
TM = metric tons
Media = average
Especie = specie

CSO: 3010/2244

UNITED ARAB EMIRATES

BRIEFS

AFFORESTATION PROJECT PROGRESSING--ABU DHABI (EN)--The country's largest afforestation project is well underway with 5,500 hectares planted including forests and grass farms, said Mohammed Rida Soorouri, head of the municipality's agriculture section. This, the Balnona project, was started in 1981 and will encompass some 23,000 hectares when finished. The project's grass farms which were featured in a television program here this week, produce needed hay for animal fodder, while conserving the soil. Another large project the section is involved with, is planting forests and grasslands in and around the new airport. In the airport's runway area alone, 48 hectares of grass are being planted. This area, like many others in the city, is fed by automatic computerised sprinklers. Research is also being carried out by the section, said Soorouri. Finding suitable varieties of fruits and vegetables including oranges, bananas and coconuts for area farms is the aim of the present research. Last year, mini-farms of one and a half of two hectares each were distributed to local farmers in Beda Zayed, Zafra, Sela and Al Khatam. Each of these includes palm trees and irrigation facilities at present. The next phase in the scheme is to plant and cultivate vegetables between the trees for maximum utilisation of water and land. [Text] [Abu Dhabi EMIRATES NEWS in English 4 Aug 82 p 3]

CSO: 5000/4716

SHASHE DAM TO SUPPLY WATER TO FRANCISTOWN

Gaborone DAILY NEWS in English 15 Jul 82 p 1

[Article by Solomon Lotshe]

[Text]

WATER FROM the Shashe Dam may start flowing to Francistown next month to assure the people of the town of a constant water supply. A new water supply system from the dam is expected to be complete in August.

The new system includes a water pipeline from the dam to Francistown and a big new reservoir built on one of the hills in the town. The water supply system of the town has also been rehabilitated.

The news were told to the Francistown residents by the Minister of Mineral Resources and Water Affairs, Dr Gaositwe Chiepe this week. She was addressing meetings in the town, at Tati-Siding and Matsiloje recently.

She told the people that the government took over water supply from the town council because it was running at a loss, very inadequate and unreliable.

Dr Chiepe explained that her Ministry took over water supply through the Water Utilities Corporation.

The Minister also pointed out

that the water tariffs in the town were raised because a lot of rehabilitation on the water supply system was necessary.

The capital cost was very high and the government had to borrow money from the World Bank to finance the project, Dr Chiepe said.

She explained that people were paying more for water in Francistown than in Gaborone because people in Gaborone were near to their water source. In Francistown people pay 60 thebe per kilo-litre and in Gaborone 48 thebe per kilo-litre.

According to the Minister, the rehabilitation, water pipeline from Shashe Dam and new water works capital expenditure was very high.

Dr Chiepe said that government had built water supply in Francistown to a capacity of 12 000 kilo-litres while the current demand was 4 000 kilo-litres.

She explained that the capacity of the rehabilitated and reinforced supply was 12 000 kilo-litres to meet with the demand of the future development programmes of the town

like railway headquarters, abattoir, industries and many others that might come to the town.

Dr Chiepe pointed out that the government did not want to limit the water supply to the present demand of 4 000 kilo litres and then in two years time raise another loan.

She added that unless something went wrong the 12 000 kilo litres would carry the people to 1995 but before that there must be work on the future requirements beyond 1995.

The Minister also briefed the people on the future development of Francistown. She said that the development consists of two big projects - the abattoir and the railway headquarters which she said would bring some change in the town.

Dr Chiepe also hoped that in the near future the government might at long last do something about the Sua Pan project. She said the development of the project, though not in Francistown, would have an impact in the development of the town.

CSO: 5000/5800

DROUGHT RELIEF PROJECTS APPROVED

Gaborone DAILY NEWS in English 15 Jul 82 p 2

[Article by Tarcisius Modongo]

[Text]

THE SOUTHERN DISTRICT Development Committee has approved Labour Intensive drought relief projects submitted to it by the Drought Relief committee of the Southern District.

A total of P20 000 has been set aside for the drought relief projects.

According to the Kanye-based Development Officer, Mr P.G. Tumedi, the Village Development Committee had in turn submitted proposals for the projects to the interministerial committee.

Both the drought relief committee and the Village Development Committee have identified their projects which vary from dam construction to road building.

In Kanye, there are plans to move the airstrip from its present place because it is a hazard to villagers since the village has grown on all sides.

Two sites have already been identified for the new air strip and the VDC is now awaiting approval from the Department of Civil Aviation.

Another project to be undertaken in Kanye is the fencing of the Kanye dam.

At Kutuku, a remote area settlement between Mabutsane and Khakhea in Western Ngwaketse, the remote area dwellers are clearing and debushing an arable plot to be used communally.

This project will help two ways, by aiding the villagers towards diversification and also serve as a temporary source of income in this drought which has resulted

in the scarcity of wild fruits and the migration of wild animals.

Mr Tumedi mentioned that although western Ngwaketse is generally regarded as arably suitable the probability of hazards although minimal were about the same at Kutuku as in other places in the area whose residents have been practising arable farming.

In other areas residents of Molopo have decided to clear the veld for the Phitshane-Molopo-Mabule road and at Leporung in the same area the community has proposed to dig and build a dam. The dam will be of a great importance to livestock. The source of water has been Molopo river but due to the construction of Disaneng Dam in South Africa it has become unreliable because the flow is no longer perennial.

At Tshidilamolomo a vegetable garden has started while Mabule residents are planning to erect a shelter at the kgotla, build a kitchen and a creche in the village.

CSO: 5000/5800

BRIEFS

DITLHARAPENG WATER SHORTAGE--A SERIOUS water shortage has aborted plans to build a community centre at Ditlharapeng village in the Southern District. Other development projects have also been halted. The Headteacher of the area's Tawana Primary School, Mr Mmolawa, told BOPA that the drilling machine had broken down and the owner had returned to South Africa after making very little progress. He said, it as doubtful that he would ever come back but the local Village Development Committee had paid P500 as deposit. However Mr Mmolawa said there was hope that help would come from the USA. Already he said, the American Embassy in Gaborone had donated a water engine and the new borehole equipment. The Headteacher also said the American Embassy had contributed to the construction of a health centre at Ditlharapeng. The Southern District Council had planned to erect a reservoir at the cost of P4 000. When BOPA reporters visited Ditlharapeng recently, about 2 000 residents were drawing and drinking water from the small drying dam. Domestic animals were also sharing the water. Mr Mmolawa also spoke about the feeding scheme at Tawana, where the store-rooms were stacked with bags of sorghum. But the serious water shortage in the village was causing problems. He also said parents had been prepared to pound the sorghum for the school children as was requested by the government. [Text] [Gaborone DAILY NEWS in English 4 Aug 82 p 2]

MAKALENG HIT BY THIRST--A WATER problem has hit Makaleng residents in the North East District, following the drying up of a water well point in the Shashe River which is the main source of water. The drying up of the well in the river is due to lack of rainfall this year. Makaleng people are reported to be almost a month without water. The North East District Council is in the meantime providing residents with water through water-bowzers three to four times a day. The water is being drawn from a borehole at Botlaote village about 12 kilometres away. Each family is rationed to two buckets per day. The clinic and the school are supplied with 2000 gallons each per day. The Council Secretary, Mrs N. Thothe has said in the meantime, the council was intending to re-equip the old borehole within the village, although the water was salty. She said the water from that borehole would mainly be used for cooking, washing and building while transported water would be for drinking purposes. Mrs Thothe further said more villagers in the North-East were likely to face similar problems. She further said the Council started supplying to schools at Matenge, Malabagwena, Masakwane, Gare and Letsholathebe villages. She said each school was being provided with three drums of water once a week per school. The Council Secretary further said the council has appealed to

the Ministry of Mineral Resources to assist. She is also appealing to all North-East Villagers to be patient because the council was working hard to put the situation under control. Mrs Thothe further said the Ministry of Agriculture has allocated P15 000 to the council to purchase water bags. [Text] [Gaborone DAILY NEWS in English 3 Aug 82 p 1]

BOBIRWA DROUGHT RELIEF--THE DROUGHT-RELIEF programme is reported to be implemented well in the worst drought-hit Bobirwa area, according to the Drought Relief Co-ordinator in the area, Mr Howard Chilume. Already, 100 tonnes of sorghum has been sent to six schools and another 100 tonnes has been distributed to remote dwellers in the district, he said. Addressing the drought relief sub-committee in the council offices in Bobonong last week, Mr Chilume said there was another 100 tonnes waiting to be distributed to the various schools in the area. He explained that the sorghum was sent to only six schools because in other schools there was still stocks of some food (analiti). Mr Chilume said more cooking pots had been ordered but that they had not yet arrived. He appealed to residents of the area to loan pots to PTAs until their orders had come. According to Mr Chilume, stamping in schools where sorghum had been sent had already started. He said people were coming forward to register for stamping. The drought relief co-ordinator reported that at Tsetsejwe the residents had already started to mould bricks for the construction of teachers quarters under the drought relief scheme. In Moletemane they had started road clearing. In both villages, however, residents have been advised to stop their projects until the projects were approved by the Ministry of Local Government and Lands. Mr Chilume also said although the drought relief programme was progressing well in Bobirwa they had transport problems. He said they had no vehicles to distribute food to various villages in the area. [Text] [Gaborone DAILY NEWS in English 6 Jul 82 p 2]

CSO: 5000/5800

FOREST DEVELOPMENT GAINS MOMENTUM IN TIGRAI

Addis Ababa THE ETHIOPIAN HERALD in English 19 Aug 82 p 1

[Text] MAKELE (ENA)--Over 17 million tree-seedlings have been planted in Tigray region in the current Ethiopian year starting last September through the area office of the Forest and Wildlife Conservation and Development Authority, and the regional peasants' association.

Disclosing this, Comrade Gebre-Medhin Adera, the regional forest development expert, said that the seedlings were produced in 23 government and four peasants' association forest nurseries. Some 12 million of the seedlings were produced in plastic bags.

Comrade Gebre-Medhin pointed out that the area office of the Authority is currently engaged in setting up model forest nurseries in suitable peasants' association localities and is rendering material and technical assistance to help peasants of the region to cover their areas with greenery. More efforts will be made in this line in future, he said.

Educationla briefings to help the peasants comprehend the importance of forest, and take active participation in forest conservaion and development are given by the area office of the Authority, Comrade Gebre-Medhin stated. He pointed out that a total of 500 peasants in the region have been trained in the current Ethiopian year alone to serve as forest conservation and development agents.

The regional forestry expert further stated that terraces have been built over 3,302 hectares by the government and peasant associations and noted that owing to the combined work of afforestation and terracing, a number of localities in the region have been covered with forests. This, he said, has immensely saved the soil in the area from being eroded by wind and rain besides creating conditions for salubrious climate.

As a result of the over 84 million forest seedlings planted in the region since the Revolution through the concerted effort of the government and the masses, an encouraging influx of wldlife to their original habitat is also being witnessed, Comrade Gebre-Medhin pointed out.

CSO: 5000/5810

BRIEFS

SEVEN MILLION TREE SEEDLINGS--Nearly 7.5 million tree seedlings were planted in the seven provinces of Gojjam region as part of the overall national endeavour to reclaim the once rich forest resources of the country. The local offices of the Forestry and Wildlife Conservation and Development Authority had organized an afforestation campaign in which people over 14 years old planted five tree seedlings each. A meeting was held recently between extension farm workers and other pertinent authorities to discuss the post-plantation programme and the care to be given to sprouting trees. In a similar venture, over 72,000 hectares of land in Charcher-Adal-Gara-Guracha province, Hararghe region, were covered with tree seedlings during a recent afforestation campaign organized by the afforestation development office. Supervisors were assigned to Awash, Mieso, Mille and Hirna towns to guard the young trees planted both in high and lowlands, according to the local office. Feeder roads were also constructed to get easy access to the demarcated areas while the regional office of the Authority was given specific information regarding the protection of incense trees in a locality called Kassie Heja. The Muktar hills in Charcher-Adal-Gara-Guracha province are reputed for rare wildlife. [Text] [Addis Ababa THE ETHIOPIAN HERALD in English 20 Aug 82 p 6]

CSO: 5000/5810

BRIEFS

CLOUDS 'MILKED'--Windhoek--Clouds scudding above the parched South West African land may soon be "milked" on a regular basis. The SWA Minister's Council has accepted recommendations that a weather specialist be appointed to examine the feasibility of instituting a permanent cloud-seeding programme. A test project carried out in March and April this year showed the milking of clouds seemed possible in the territory, the council was told. Large areas of the territory, regularly plagued by drought, are experiencing one of the worst drought cycles in history. The report before the council said the chances of successful rainfall modification were small during drought periods, but would reach maximum effectiveness in years of normal and high rainfall. "Cloud-seeding is not an answer to a drought situation during the drought but should rather be undertaken on a continuous basis if undertaken at all," the report said. The technology should not be viewed as a water supply scheme in itself. "At best it can be regarded as a supplement to existing sources of supply." The annual cost of a rainfall modification programme to be conducted yearly over a period of four to five months was estimated at R330 000 at current values. An initial capital outlay of R225 000 would be required. The report recommended a consultant be contracted to establish how much additional water the technology could produce and whether the benefit warranted the cost.--Sapa [Text] [Johannesburg THE CITIZEN in English 20 Aug 82 p 10]

CSO: 5000/5802

NIGERIA

BRIEFS

DESERT ENCROACHMENT CAUSES MIGRATION--IT has been disclosed that desert encroachment in parts of Borno State has forced thousands of people in the state to migrate to neighbouring states of the federation. This was disclosed in the House of Representatives by a member representing Matchina Constituency of the state, Alhaji Bukar Mele. Alhaji Bukar, who was moving a motion to this effect, stated that the situation had also forced schools in the state to close down indefinitely. According to him, the desert encroachment coupled with the sand dunes had overtaken the area, making farming very difficult. He said that the encroachment was hampering food transportation from other states, adding that the access roads were now inaccessible. The House, therefore, directs its committee on agriculture and natural resources to investigate the situation and recommend remedies within four weeks after the motion had received overwhelming support from members. [Text] [Kaduan NEW NIGERIAN in English 8 Jul 82 p 16]

CSO: 5000/5795

NORTHERN TRANSVAAL RAVAGED BY DROUGHT

Johannesburg THE STAR in English 4 Aug 82 p 1

[Article by Pamela Kleinot: "Dry Veld Spells Death"]

[Text] Drought has ravaged huge areas of the Northern Transvaal, aggravating the hunger problem and foreshadowing death through disease for thousands of children.

Every year an estimated 50 000 children in South Africa's rural areas die from malnutrition and malnutrition-related diseases. But this year it is likely the death rate will rise.

The devastation of drought--empty rivers, no harvest--adds to the toll taken by diseases bred of poverty, overcrowding and malnutrition.

During a week-long survey of drought-stricken areas The Star found:

--There is an acute shortage of water, even for drinking in some areas as rivers and streams have dried up.

--Crops have failed, including maize which is the staple diet of millions.

--There is little grazing left.

"There's an undeclared famine in Gazankulu," a senior health official told The Star.

Lebowa's Secretary for Health, Dr Machupe Mphahlele said the extent of malnutrition in his area was frightening. He estimated 100 000 children in Lebowa were malnourished.

Lebowa and Gazankulu are fragmented homelands which share borders and straddle most of the Northern Transvaal. Both are mostly thorny, rocky wastelands but each has a corner of the wilderness area of Tzaneen with its lush, green meadows.

The recent polio epidemic which has killed at least 28 children and paralysed 253 others to date, has focused attention on the northeastern Transvaal.

The Star has established:

--Polio is a mere drop in the ocean of disease that ravages children daily in these rural areas. Gastro-enteritis is the biggest killer of black children--followed by respiratory infections, malnutrition and measles. At a hospital in Gazankulu 50 patients were being treated for typhoid. Doctors said this number was not unusual. Tuberculosis and whooping cough are also rife.

--People live in overcrowded and unhygienic conditions. For most the bush is their toilet and contaminated rivers their water source.

--People are poor because there are simply too few job opportunities. A family of six often has to live on R40 a month--or less--and depend on migrant workers for this cash. There are few men left at home.

--Local food production is low because of land shortage. There is also insufficient water to grow crops. People are forced to buy food at local stores at considerably higher prices than in urban areas.

--Health services are inadequately funded, poorly equipped and understaffed. They are inaccessible to many people who lack transport facilities. Sick people may have to walk 15 km to a clinic. Hospitals are overcrowded with patients sharing beds and sleeping on the floor.

Lebowa has requested drought relief from the South African Government, reports The Star's Farming Correspondent.

A spokesman from the Department of Co-operation and Development yesterday confirmed it had been asked for financial aid for drilling boreholes. He added the matter was receiving priority attention but no decision had yet been taken.

CSO: 500/5808

FEARS OF RUIN AS DROUGHT GRIPS NATAL REPORTED

Johannesburg THE CITIZEN in English 17 Aug 82 p 12

[Article by Tim Clarke]

[Text] **DURBAN.** — The drought in northern Natal and the Midlands of the province is reaching critical proportions. Farmers in both areas claim they are facing ruin.

Cattle and maize farmers in northern Natal have been badly hit by the prolonged drought as have maize and vegetable farmers in the Midlands belt.

The chairman of the Dundee Farmers' Association, Mr Glynne Barrant, said yesterday the situation for both dairy and maize farmers in northern Natal was reaching a "critical stage". Most dairy farmers had culled their herds in autumn this year in expectation of the bad period.

He said that despite this culling, there was hardly any winter fodder left. Farmers faced disaster unless heavy rains fell soon.

The situation of maize farmers in the area was equally bad. Because of poor returns from the present maize crop it was estimated that only 20 per-

cent of the farmers in the area would be able to repay their loans from the Land Bank used to finance their present crops.

According to farmers interviewed, the situation is extremely serious. One told The Citizen yesterday that the maize crop would only be about 30 000 tons this year because of the lack of rain. This was half last year's crop.

Many vegetable farmers interviewed by The Citizen said their crops were a total write-off. A farmer in

the Howick district said many of his neighbours had quit and had moved to Durban or Pietermaritzburg to find work. He said the crippling heat had been devastating and thousands of hectares of vegetables were ruined.

He made the gloomy forecast that even if rains fell now it would be too late to save the crops.

WATER IMPORTED FROM NEIGHBORING COUNTRIES

Mbabane THE TIMES OF SWAZILAND in English 10 Aug 82 pp 1, 15

[Article by Donny Nxumalo]

[Text]

SWAZILAND will continue to buy water from neighbouring countries if the present water shortage in border areas continues.

This was stated by the Minister of Works, Power and Communications, Dr. Victor Leibrandt, yesterday.

Lomahasha still imports water from Mozambique and Lavumisa imports water from South Africa. Swaziland has an agreement with the two neighbouring states to supply these areas with clean water.

In a separate interview, the director of the Water and Sewerage Board, Mr. Christopher Mavuso, said boreholes that were installed in the two towns did not generate enough water to supply the community.

The water shortages in these areas have been in existence for a number of years. Water from the two

countries are supplied by tankers. The government of the two countries send bills to the Swaziland Water Board who pay for the water.

The communities in the two towns pay the water board in normal rates. The board distributes water to the communities by trucks.

Mr. Mavuso stated, however that when Mozambique is struck by droughts, it breaks the agreement and fails to supply water because it has greater need at home. Mr. Mavuso disclosed that at one time, the water board had to send water tanks by trucks all the way from Manzini to Lomahasha because Mozambique had halted supplies.

Mr. Mavuso said, however that it was not economically viable to build a water system in Lomahasha and Lavumisa.

"It is always a problem when you don't have your own water supply, but it is much cheaper to import it," he said. "One has got to consider the planning and financing and whether or not the funds are available," Dr. Leibrandt

said.

Water shortages reached crisis proportions in the Siteki area in 1980, but Dr. Leibrandt said the repairing of the Lugongolweni dam has alleviated the situation. "It is a continuing problem, and people should use less water while we plan for a more lasting solution. We should economise while we build for the future. Siteki is certainly one of our priorities," he said.

Dr. Leibrandt said his ministry has completed a number of water schemes throughout the country.

"At least 50 schemes have been completed and half the population is already getting clean water supplies," he said.

He said seven boreholes have already been completed in the Shiselweni district supplying 10,000 people. He said another scheme run by UNICEF is presently working on a E1 million water supply project in Nhlangano.

He said rural water projects are being conducted by British and Canadian aid.

WFP AID TO DROUGHT-STRIKEN FAMILIES REPORTED

Mbabane THE TIMES OF SWAZILAND in English 9 Aug 82 p 1

[Article by James Dlamini]

[Text] THE WORLD FOOD Programme is to send emergency food aid worth E1.5 million to families in Swaziland's drought stricken areas.

The food is expected to feed more than 83,500 persons for a period of three months.

The acting representative of the World Food Programme in Swaziland, Mr. Charles Cohen said 3,000 tons of white maize will be purchased in Zimbabwe out of World Food Programme funds to be delivered to Swaziland shortly, possibly in October.

"This food aid grant will also include 300 tons of pulses (dried beans, peas for making soup) and 150 tons of edible oil," a statement said.

Swaziland's request was approved on August 5 by the Director General of the Food and Agriculture Organisation, Mr. Edward Saouma.

Agreement

The pulses will come from Holland and the edible oil is to be bought from the United States. Mr. Cohen and the Minister for Agriculture, Mr. A.K. Hlophe are scheduled to meet sometime this week for an exchange of letters to formalise the agreement.

"When the letter of understanding has been signed it will be sent to FAO headquarters in Rome," Mr. Cohen said in an interview.

The letters will briefly set out the role the FAO and the Government will be expected to play. The food will be delivered to the Ministry of Agriculture and Co-operatives which will be responsible for distributing it among the affected families.

An emergency food distribution committee will be established jointly by the FAO office in Swaziland and the Minister of Agriculture and Co-operatives.

"We will plan the logistics of moving the food from warehouses in Matsapa to the districts. We will also determine where and how much food has been distributed," Mr. Cohen added.

Food to the Rural Development Areas will be distributed by RDA's programme managers. Outside the RDAs, food will be

distributed through the District Commissioners' offices and senior agricultural extension officers, and co-operative officers.

Exploitation

Asked what measures would be taken to ensure that aid food would not be exploited or sold at the expense of the starving families as has happened elsewhere in Africa, Mr. Cohen said:

"I will like to emphasise that once food reaches Swaziland, it will be the property of the Government. It will be the Government's duty to see that it is distributed properly and to the right people. However, we will have a very comprehensive accounting system, by which, at a glance we will be able to tell if food has gone astray and at what point."

"The Ministry of Agriculture and Co-operatives gave us accurate details when submitting the request, that is the reason why there was no time wasted to have the request approved," Mr. Cohen added.

"We did not have to go back to the ministry to seek more information. We have a time limit. We are striving to have the food here by October, because the situation is expected to be critical from October to March next year," Mr. Cohen said.

The most highly affected area by the drought is the Shiselweni district.

Here is the break-down of the drought areas and people affected:

Shiselweni district:
40 760 people; Piggs Peak
sub-district: 20 040 people;
Manzini district: 17 970;
Lubombo: 4 800 people.

POLLUTION STUDY IN HOMS

Damascus AL-THAWRAH in Arabic 17 Jul 82 pp 5, 10

[Article by Rasim al-Wa'ri: "Solutions and Proposals to Deal with Environmental Pollution Danger in Homs"]

[Text] Students of the production camp in Homs recently carried out an environmental pollution study, established by the Research Society, by conducting a comprehensive survey and integrated study concerning the truth about industrial establishments that contribute to environmental pollution, as well as the al-'Asi River basin.

Based on this, these efforts were aimed at the security and health of the population of Homs Province. In support of those effort and their success, we are publishing the following study about environmental pollution in the Province and the future dangers. The study also raises some solutions and proposals to ward off air pollution in Homs Province.

Homs Amidst the Gases of Factories and the Refinery

The city of Homs is located in the center of the country. It is considered a connecting link between north, south, east and west. It has a population of about 1 million. Homs is one of the largest provinces in the country. The city of Homs is the third largest in population after the capital, Damascus, and Aleppo. The al-'Asi River runs through it and forms a large lake west of the city, known as Lake Qantinah. Several important industries are concentrated around the city, including an oil refinery, cement and electrical works, as well as other factories that emit large quantities of gases and poisonous wastes. These substances pollute the atmosphere and rivers, which results in damage to the population's life, especially in the new residential areas on the roads to Damascus, Mafraq, and Tudmur and the western and southern suburbs.

The relatively damp climate, along with wind direction and speed, plays an important role in gaseous concentrations in the city's atmosphere, since the concentrations are lowered when wind speed increases, and the concentrations of pollutants increase when wind speed drops. This is especially true when the wind speed drops over the city at 10 o'clock at night until morning, throughout most of the year.

Basic Atmosphere Pollutants

The study enumerated pollution sources with the following elements:

1. Coal oxide and dioxide
2. Sulphur dioxide
3. Nitrogen dioxide
4. Hydrogen sulphate
5. Ammonia gas

Pollutants Emitted From the Nitrogen Fertilizer Plant

Three nitrogen fertilizer plants--al-Calnitro, the ammonia urea plant and the Tarbil super phosphate--discharge large quantities of gases, resulting in air pollution. The amount of sulphur dioxide gas emitted from the Babcock boilers is estimated at 1476 square meters per hour, resulting from the burning of fuels containing approximately 1.5 percent sulphur, in addition to discharging nitrogen oxide and coal oxide and dioxide gases.

About 925 cubic meters per hour of sulphur oxide gases are discharged from the ammonia urea boiler's smokestacks, in addition to undetermined quantities of gases derived from the burning of crude naptha. The treating of parts of ammonia urea results in the amount of 180 cubic meters, while the al-Calnitro factory discharges 2,000 cubic meters per day. The clouds of ammonia nitrates, spewed forth from the towers of al-Calnitro are also considered a chief source of pollution of the Qatinah area, which is close by the company, as well as the industrial facilities neighboring the lake.

Pollutants Emitted by the Qatinah Electrical Works

The Homs air pollution study reported that the use of 500 tons of fuel per day, containing 5 percent sulphur, whose burning gives off 12,250 cubic meters of sulphur oxide gas per day, results in increased air pollution, in addition to undetermined amounts of coal oxide, dioxide and nitrogen gases.

Pollutants from the Oil Refinery

The burning of 600 to 700 tons of fuel per day in the heating process results in 12,250 cubic meters of sulphur oxide gases, in addition to hydrogen sulphide, nitrogen oxide and petroleum gases, being discharged from the smokestacks of the carbonization department.

The discharge of sulphuric gases increases to 24,500 cubic meters per day when the work of the unit producing sulphur stops, due to its burning.

The production of 180 tons of butane gas, and its bottling, results in the leakage of approximately 1 ton per day, noting that the surplus is put to the torch.

Pollution Produced by the Oil Paints Company

As a result of burning 5 tons of fuel, 60 cubic meters of various sulphur oxide gases are emitted into the atmosphere, in addition to combustion gases and coal dust.

Solutions and Proposals to Ward Off Air Pollution in Homs

The study reached the following solutions and proposals to ward off the danger of air pollution in Homs:

1. Fuel is the chief source of pollution in Homs, in view of its containing a percentage of sulphur of up to 5.2 percent, which leads to the discharge of sulphur oxide. This is a high percentage of sulphur, and large quantities of it settles in fuel, despite the work of the unit producing sulphur in the hydrogen separators and the Mirox units, as a result of the complete burning of the hydrogen sulphide gas, from which is derived the free sulphur. The study emphasizes that the percentage of sulphur in fuel must be reduced through the use of Arabian crude oil, which is noted for the reduced concentrations in its composition, and the establishing of hydrogen units to extract the sulphur in crude oil, so as to ensure the reduction of sulphur to the minimum extent possible.

2. It is impossible to determine the percentage of air pollution through the gases discharged from the sources of pollution, and to use measurements conducted through a time period to determine the extent of pollution and the extent of health damage to the population, in view of the changing weather conditions during the day and during the months of the year, since concentrations of pollutants increase and decrease in accordance with those atmospheric conditions. Therefore, not less than six fixed centers, with measuring positions at differing distances, must be used to conduct measurements throughout the year. Tables of internationally permitted levels of gases must be used, and a specialized medical authority must be tasked with establishing medical inspection and permanent supervision over the population, in order to estimate the health damage that pollution causes, and its various effects on mankind.

7005

CSO: 5000/4715

MINISTER REASSURES PEOPLE ON DROUGHT

Harare THE SUNDAY MAIL in English 22 Aug 82 pp 1, 3

[Text]

NOBODY will die from the drought unless there is a breakdown in communications, says the Minister of Water Resources and Development, Cde Cephas Msipa.

"My ministry and the Ministry of Local Government and Town Planning have geared themselves to ensure that no one dies," he said in an interview yesterday.

"We are communicating with district administrators, and provincial water engineers are kept informed of any worsening situation.

"Of course, drought relief takes priority over everything else."

The big worry was about cattle surviving in drought-hit areas, in which the lives of nearly three million people are affected.

"There is no grass in parts of Matabeleland and the Midlands, and why people are hanging on to their cattle I don't know, because they will definitely die," said Cde Msipa.

He was speaking on his return from one of his regular tours of drought-stricken areas to gauge the pace of development and show people that the Government is concerned.

Cde Msipa said people agreed with him that their cattle would die, but they still insisted on not selling

to the Cold Storage Commission.

"This is an area where we have no answer. We could give people water for their cattle, but we are not able to give them grass.

"I go into communal areas nearly every day and it is a pathetic and sad state of affairs as far as cattle are concerned.

"In Matabeleland at present they are surviving on tree leaves, but how long can they do that?" he asked.

Asked why people were hanging on to their animals the minister said they were worried about how they would plough when the rains came and whether the cost of cattle would increase so that they would be unable to afford to buy more if they sold now.

"On my last trip I saw them using cattle to cart water in some areas where they have to travel a 30 km round trip to get water in drums. The cattle are still useful."

A few people were getting far less for their cattle than they would have just a month ago, because the animals were deteriorating rapidly.

"The CSC is now buying what are normally considered rejects," Cde Msipa said.

On Thursday and Friday he had visited the worst affected areas of Matabeleland to see how people were coping.

The ministry had increased its supplies of borehole drills from 12 to

20 in the last two months, and expected another seven to arrive from Britain next month.

There had been problems at Godhlwayo, in the Filabusi area, where there was no underground water.

People there were getting water in drums and bowlers, but this was too expensive and the Government wanted to end the practice as soon as possible.

Engineers were using the sand abstraction method in the area, with villagers helping to dig 10 km trenches to pump water from a dry river bed to a central point in the communal area.

Hand or diesel pumps and reservoirs were installed. Already 117 such constructions had been put in and the pipes at Godhlwayo could probably be installed in two days.

"Eventually this system would be upgraded to form a reticulated village water supply.

"At the moment it is better for women to come to the reservoirs to collect water, which is clean as it has been filtered by the sand and more hygienic than the old method of simply digging a shallow hole in a river bed," he explained.

At Ntabazinduna Cde Msipa had authorised the employment of more people to speed up work on a village water supply scheme which started two weeks ago and would be ready by the end of September.

There villagers were helping to dig trenches over 7 km.

At Kentucky resettlement scheme work to provide reticulated water from the Mzingwane River should have been completed last Thursday, but received a major setback when old water pipes burst under pressure.

Villagers who had to walk 3 km to get water from the river bed were helping to dig up the pipes.

"People are being very practical," Cde Msipa said. "They have lived with problems and hardships all their lives and are always looking for solutions.

"They don't look outside for help but try to do whatever they can, and with Government assistance it is most encouraging to see what they can do."

In Tsholotsho four rigs were drilling boreholes while tractors were deepening water pipes. The Government was spending \$40 000 there.

At Dinyane, where work on a village water supply had to stop because of the security situation, ministry workers were drilling boreholes and fitting them with hand pumps.

Another problem area was "kayi, particularly the police camp in the district, where the dam was quickly drying up.

"It's clear that very soon there will be no water, but engineers who were out there last week could not find a place to drill for water."

The chief engineer had gone out with a water di'ne who had indicated two places.

"We will now send a drill rig in."

GOVERNMENT TO ESTABLISH VILLAGE WATER SUPPLY CENTERS

Harare THE HERALD in English 4 Aug 82 p 11

[Text] THE Government will establish at least 50 village water supply centres in the rural areas, the Deputy Minister of Water Resources and Development, Cde Joseph Kaparadza, said yesterday.

One such centre has recently been established at Shumba village in the Chikwaka communal land at a cost of about \$40,000.

Another centre would be established in September at Makosa village in Mutoko and would cost about \$60 000, Cde Kaparadza said.

The deputy minister was speaking at a meeting of district council chairmen, district administrators, councillors and senior Government officials from Mashonaland East province, at Seke Hall, south of Harare.

"This is just the beginning of a long-term programme to supply clean water to the people in the rural areas."

The centres would be established at points which would serve between 500 and 2 000 villagers.

Water would be led to brick sheds. Washing basins would be installed in the sheds so that people could do their washing.

"The places will be adequately protected from rainfall, wind and wild animals.

"In other areas, where there is not enough water in the rivers and streams, a water trough will also be built beside the shed for cattle and other animals," Cde Kaparadza said.

He appealed to the people to help the Government by digging trenches where the pipes would be laid. This would reduce the costs of the project, he said.

"Britain and Sweden have, through their Zimcord pledges, said that they will give six drilling rigs each to Zimbabwe. We are therefore waiting for them so as to drill more boreholes quickly.

"The demand for water, especially at rural day secondary schools and proposed growth points, calls for the immediate attention of the Government," the deputy minister said.

CSO: 5000/5792

SQUATTERS FLOCK TO CHINAMHORA WATER PROJECT

Harare THE HERALD in English 7 Aug 82 p 6

[Text] THE establishment of a village water supply centre in Chinamhora communal land has attracted many squatters, the Goromonzi district administrator, Cde Dakadzai Sithole, was told this week.

At a meeting attended by farmers and heads of villages at Shumba village on Thursday, Cde Sithole was told that people had started drifting from other areas to Chinamhora, attracted by the development taking place there.

"There are now about 50 'foreign' families in this area now and if nothing is done as soon as possible more people will come," the village heads said.

"This might cause very serious over-crowding, leaving our cattle without enough grazing land."

The district administrator said he would report the matter to the Ministry of Lands, Resettlement and Rural Development for action.

The villagers demanded that the squatters be moved before the next rains so they could have time to prepare for the season.

Another problem faced

by the villagers was a transport shortage. They told the district administrator that only one bus operated once a week, making it very difficult to travel.

"We hear that there are many bus operators holding permits to serve the area, but they don't use this route," the villagers said. Meanwhile, other operators wishing to come in are blocked by these people who claim to be sending buses there.

"Some permit holders are just monopolising this route yet they have failed to serve it efficiently. Action should be taken now to correct this."

Pirating had increased at the expense of the farmers who had to get their vegetables to the market daily.

Cde Sithole said he would try to discuss the problem with the president of the Zimbabwe Transport Organisation, Cde Solomon Tawengwa.

"If nothing is done then, I will have to report the matter to the Ministry of Roads and Road Traffic."

The ZTO is the controlling body for rural bus operators throughout the country.

PAKISTANI AID FOR DROUGHT-STRICKEN COMMUNAL LANDS REPORTED

Harare THE HERALD in English 16 Aug 82 p 3

[Text]

PAKISTANI water engineers will soon arrive in Zimbabwe to help ease the drought crisis, Pakistan's Charge d'Affaires in Harare, Mr Sheira Khan, said yesterday.

ZIANA

In an interview Mr Khan said his government had decided to give the issue "top priority" because of the threat it was posing in the communal lands.

Consultations between the two governments were now under way and officials from the Zimbabwean Ministry of Water Development were already in Pakistan to select the engineers.

They would assist in drilling boreholes in drought-stricken areas and supplying more water in the communal lands.

"We will do everything possible to ensure that this problem is solved," Mr Khan said.

The charge d'affaires said another team from the Ministry of Transport was in Pakistan recruiting technicians for Air Zimbabwe.

He described the relations between the two countries as excellent, adding: "We have always felt that we should try as much as possible to assist Zimbabwe where we can."

His government would soon approach the Zimbabwean Government to offer doctors to work in rural health centres.

A trade agreement between the two countries was also being drawn up as a result of talks held when the Prime Minister, Cde Mugabe, visited Pakistan last year.

"We hope that as soon as this trade agreement is formed trade between the two countries will be strengthened and relations cemented," he said.

On the international scene, Mr Khan said Zimbabwe and Pakistan held similar views.

He condemned South Africa for its continued attacks on Angola and its intransigence over Namibia.

"It is our view that the people of Namibia are entitled to their independence and that South Africa must withdraw from the territory immediately.

He hoped that the Western Contact Group would put pressure on South Africa to speed independence for the territory.

He condemned South Africa for its racial policies adding that sooner or later the regime would be crushed and replaced by a majority government.

His country would continue to give material assistance to Swapo and ANC guerillas.

SHUMBA IRRIGATION SCHEME, POWER SYSTEMS REPORTED

Harare THE HERALD in English 7 Aug 82 p 9

[Text] SMALL irrigation schemes and simple power systems will be started soon at Shumba village, Chinamora communal land, following the establishment of a water supply centre, the district administrator, Cde Dakadzai Sithole, has said.

If the projects succeed, Shumba could be the forerunner of thousands of other village development schemes in the communal lands.

Speaking in an interview on Thursday, Cde Sithole said his administration planned to mobilise the people to spearhead rural development by increasing vegetable and crop production through irrigation schemes.

More biogas plants would also be established in the area to provide cheap power to the people's homes and thus improve their living standards.

"The use of simple technology will transform the present structure of the rural villages. It is easier for the people to run such projects and therefore become self-reliant in water and electricity," Cde Sithole said.

The Shumba village water supply centre marked the beginning of a long-term programme initiated by the Government to get piped water to the communal lands.

Speaking at a meeting of district administrators and district council chairmen on Monday, the Deputy Minister of Water Resources and Development, Cde Joseph Kaparadza, said 53 such centres would be established throughout the country.

Work on another centre at Makosa village, Mutoko, would start in September.

He urged district councils to pinpoint areas of need and liaise with district administrators so that the programme succeeded.

At Shumba village, water is drawn from a nearby river by a power-driven pump into two big tanks. It is then purified and transferred into a reservoir.

Water pipes had been laid from the reservoir on a hilltop to nine supply points in the village.

"The trenches in which the pipes are laid, were dug by the people and this shows how important community spirit and self-reliance are for development," Cde Sithole said.

The \$40 000 supply centre marked the introduction of cheap, but very useful technology in the Chinamora communal land.

Clean water is supplied to about 500 villagers. It is led to brick and concrete sheds, and about 5 m away from the water taps are washing basins where people do their washing.

Records at the nearby Nyaure clinic, which serves about 20 000 people in the area, show that the number of people treated for water-borne diseases dropped from about 800 to nearly 450 during the last six months.

The Government has stationed a water maintenance officer at the village.

The district administrator said two biogas plants and a solar energy pump had already been installed at various centres in the district.

The biogas plants provided electricity and power to Chinyika primary and secondary schools and to the Juru district service centre, on the Mutoko road.

People in the area were prepared to contribute towards the maintenance costs so as to catch up with the development trends in some areas in Zimbabwe.

BRIEFS

DROUGHT DISASTER AVERTED--Chibi--The possible closure of two schools, Jenya and Denga in Chibi District, Masvingo Province due to the drought has been avoided by the construction of a \$17 000 5 km trench to supply water to the area. The District Administrator, Cde Steven Chikasha said the water situation had become so bad that the only option left had appeared to be closing down the schools. "It was not only the two schools which were affected but the entire surrounding community was threatened," he said. But 16 villages with about 300 people got together and approached the Ministry of Water Development for help. "The community did not want to simply wait and be given; they concertedly made contributions and raised \$1 000 which was added to the \$16 000 provided by the ministry." He added that the money provided by the ministry had gone towards the buying of pipes, cement and the construction of two reservoirs at the schools which would also serve as central collection points for the surrounding communal areas. The existing Chombwe pipeline scheme built by the District Development Fund (DDF) to supply water to Chibi District Offices was constantly disrupted by the local people who, faced with water shortages, would cut the pipe to allow their animals to drink. "The community effort exercised by the local people will inevitably induce them into identifying with the new scheme since it is their product," Cde Chikasha said. "They will respect their own efforts." The latest extension would be connected to the existing Chombwe scheme which draws its water from the Tokwe river dam.--Ziana [Text] [Harare THE HERALD in English 14 Aug 82 p 5]

DROUGHT AID--Bulawayo--It was not possible at this stage to say how many water engineers would come from Pakistan, the Minister of Water Resources and Development said yesterday. The Minister, Cde Cephas Msipa said two officials of his ministry, Cde Andrew Mpala and Cde Wonder Banda only left on a recruiting trip to Pakistan on Tuesday last week. The minister said he wished to repeat an earlier statement that the staff position in Matabeleland was pretty well depleted and needed to be brought up to a functional level. The recruiting of Pakistani water engineers was announced at the weekend by that country's Charge d'Affaires in Harare, Mr Sheira Khan, who said this would help ease the ravages of drought affecting nearly 3 000 000 Zimbabweans. [Text] [Harare THE HERALD in English 17 Aug 82 p 3]

CSO: 5000/5809

FIND OF ILLEGALLY-DUMPED CHEMICALS OFF TURKU CAUSES CONCERN

Search For More Barrels

Helsinki HELSINGIN SANOMAT in Finnish 25 Jul 82 p 18

[Article by Harri Nykanen: "Search For Missing Poison"]

[Text] The search for barrels containing poison given to the table drawer manufacturer, Euro Industri, for disposal has been going on for 3 weeks. More than 20,000 kilos of various kinds of poisons have already been found and the search is still going on for 40 more barrels. During the search three individuals were jailed and eight were detained. Two of the detained have been let go. The search goes on for three other individuals in the same manner as the search for barrels -- without knowing where.

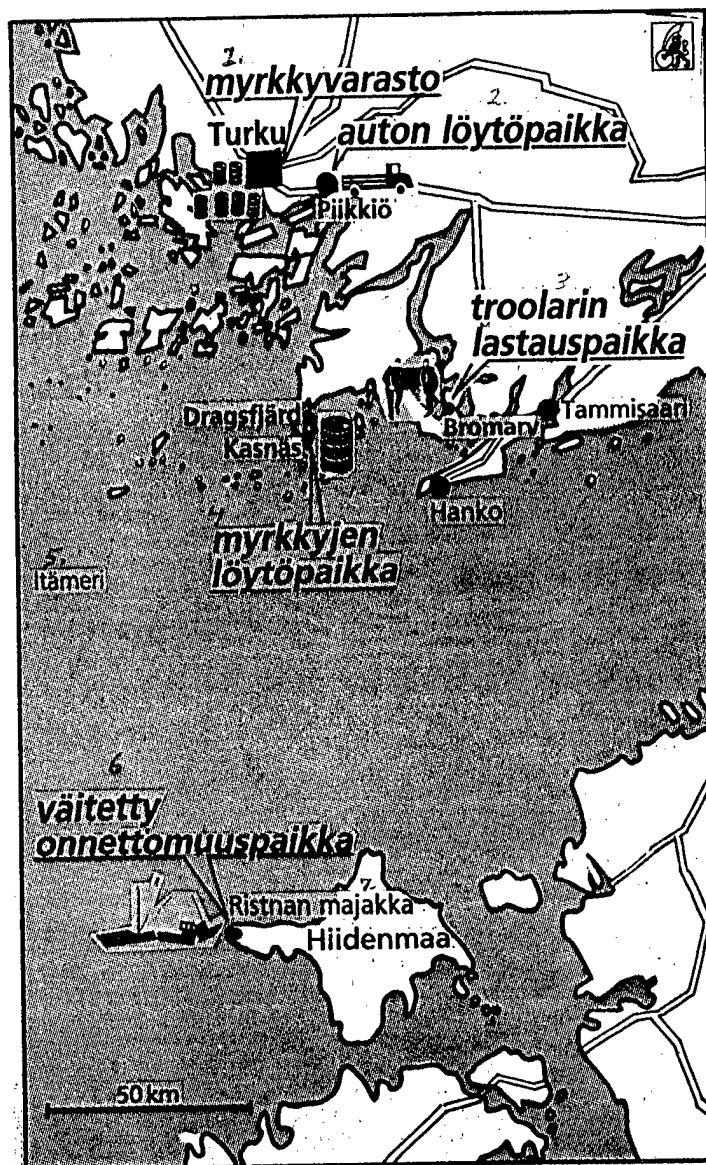
The first three barrels of poison were found on Monday 28 June on the uninhabited outlying rocky islets of Krakbarskar. Two of the barrels were on shore and the third was under water off the shore. Several holes were punctured in the 200-liter barrels, apparently for the purpose of sinking them. However, according to another theory presented later the holes were made so that the gases forming from the chemicals would be able to escape.

The barrels contained steel cannisters and glass bottles of various sizes. Some of the bottles had washed up on the shore and were broken on the rocks. There was a very strong odor in the vicinity and the firemen who transferred the poisons to the shore wore protective clothing and oxygen equipment.

The investigation of the poison find was conducted by the Turku Central Criminal Police. It began to trace the source of the poisons by means of the labels on the bottles, among other things. On some of the bottle one could clearly read the word poison in Finnish and there were markings of laboratories on several bottles.

On the third day the police requested information from the public about a truck that was in the area of Kemio--Kasnas the week before Midsummer Day. It was said the the first letter on the license plate of this stubby nosed dark vehicle was A.

The source of the poisons and the individual who sunk them were disclosed on Saturday 3 July or 5 days after the poisons were found.



The first barrels of poison were found on the outlying rocky islets of Krakbarskar on 28 June.

Key:

- | | |
|----------------------------------|---------------------------------|
| 1. Warehouse for storing poisons | 4. Location of found poisons |
| 2. Location of truck | 5. Baltic Sea |
| 3. Loading site of trawler | 6. Location of alleged accident |
| | 7. Ristna lighthouse |

Euro Industri Inc., which has operated for 10 years in Helsinki with zero sales, was found to be behind the contract for sinking the barrels. In the spring and fall by means of telexes the firm offered to dispose of poisons from industrial plants which had become exasperated with several kinds of hazardous waste.

The Keskuslaboratorio Company of Espoo turned out to be the first party to accept the offer. The firm, which operates as a joint research institute for the wood processing industry, gave Euro Industri approximately 2,000 liters of various kinds of poisons for disposal. Keskuslaboratorio accepted the offer without determining whether Euro Industri had a permit for or experience in the disposal of toxic substances. The poisons were delivered on 13 and 17 May.

In its enthusiasm to transport poisons Euro Industri went beyond its actual area of operations. In the trade registry the firm has promised to purchase manufacturing licenses and place orders from Finland and abroad.

Several individuals known to the police were found to be connected with this firm. The managing director was Raimo Niemela, a junk dealer from Vantaa. A Helsinki attorney, Matti Cederberg, who had power of attorney for the firm, was responsible for making contacts with the producers of poisons.

Poisons Missing

Keskuslaboratorio stated that Euro Industri had been given approximately 2,000 liters of poison for destruction. It thus became clear that a full 1,000 liters are still missing. The police estimated that Euro Industri had acquired poisons from other firms also.

Also the origin of the truck used for transporting the poisons became clear on 3 July. The vehicle was owned -- indeed, not in his own name -- by a shipmaster born in Turku. The police suspected that he had used the vehicle to transfer the poisons to the Normandie trawler owned by him. The boat was frequently anchored in the harbor of Bormarv between Hanko and Kemio.

The shipmaster was well known to the police. He had several convictions against him for smuggling alcohol and concealing stolen goods. Now he was suspected of new crime -- a felony involving the illegal dumping of waste.

On Sunday 4 July the police disclosed another producer of poisons which had turned over its products to Euro Industri.

The Nokia Corporation's Tampere condensation plant turned over 40 barrels of PCB-poison, which becomes concentrated in nature, and nearly 20,000 kilos of used condensers, which contained PCB as an insulating material.

Also the Fargo-make truck was found on Sunday from a wrecking yard. The truck had been there for nearly a week. The owner of the wrecking yard declared the vehicle only after he recognized it from a picture in the newspaper.

Poison Cache Is Found

On Monday 4 July it was reported that approximately 20,000 kilos of toxic waste from Nokia had been found from the cache in the outskirts of Turku. It is calculated that 7 tons of waste condensers and 24 barrels are missing.

According to a more precise accounting of Nokia only 12 barrels contained a diluted PCB-solution and the remaining barrels contained C4-waste as well as engine oil.

Exactly a week after the barrels were found the first arrests were made and the first public notices for individuals wanted by the police were issued.

In Helsinki, Euro Industri's attorney came to the police, and an individual suspected of involvement in the transporting of poisons did the same in Turku.

On Tuesday 6 July four barrels of poison were found off the coast of Kemio. On the same day the shipmaster, who has become a central figure in the poison case, announced through his lawyer, Reino Lunden, that the barrels were not sunk on purpose. According to him an explosion took place on the trawler transporting the poisons and as a result six barrels were thrown overboard from the damaged side of the vessel.

According to the shipmaster the explosion took place on the Danish trawler on the western point of Hiidenmaa in the vicinity of the Ristna lighthouse. Two men were injured in the explosion caused by the mixing of chemicals. They were transferred to a hospital just below Stockholm.

One of the injured, Viljo Lindroos, escaped from the hospital and returned to Finland. According to the statement made by the shipmaster instructions for treating the man were requested from Keskuslaboratorio, which urged them to take the injured man to a hospital. The man did not get along well in a Finnish hospital either and escaped again.

However, they succeeded in finding a private doctor for this runaway patient and he was treated with saltpeter bandages.

The shipmaster told attorney Reino Lunden that he sought evidence of the accident and walked to the nearest police station.

Shipmaster On Wanted List

On Wednesday 7 July it was reported that the individual known as the shipmaster is from Jarvenpaa, but his name is Jukka Ojaranta and was born in Turku. A public notice for the arrest of Jukka Oajaranta of Turku was issued at the same time. A businessman from Uusmaa was detained on the same day.

On the following day the police and the Coast Guard began the search for the approximately 40 missing barrels. The search was concentrated on the western side of Dragsfjard where there are several depressions at the bottom of the sea.

The navy loaned out its military secret, an American-made oblique echo depth sounding device, for the purpose of the search. The device recorded suspicious formations at the bottom of the sea. A more thorough inspection was left to divers.

On the first day of the search Interior Minister Matti Ahde (Social Democrat) condemned the sinking of the poisons in strong language. Also he stated that the poisons could not have been transported to the GDR according to a report issued by the Embassy of the GDR in Helsinki. According to the embassy that country's law prohibit the importing of hazardous waste.

On that same day Interior Minister Ahde made a personal visit to the site where the poisons were sunk.

The first observations of Jukka Ojaranta were made in the vicinity of Seinajoki and Kauhajoki on Thursday 8 July. He was driving a white Opel Record with the license plate number TCU395. The vehicle had been borrowed from a painter in Helsinki.

Ojaranta was seen eating in a Seinajoki restaurant. When a certain customer recognized Ojaranta, he left immediately in the direction of Kauhajoki. En-route he was followed by a police car, but he managed to shake it off just before Kauhajoki. There was at least one other person with Ojaranta.

On Friday the white Opel was seen in various parts of Pohjois-Satakunta, Karvia and Kankaanpää, among other places. On Monday 12 July reports begin to come in from Southern Finland already. On Monday, however, the police detained an Uusmaa dispatcher suspected of arranging the poison shipment.

Additional high-technology equipment was obtained for making the search in Dragsfjärd more effective. A metal detector built by the Finnish Army was brought to the site.

On Wednesday 14 July the search for the barrels had to be halted without any results. The depth sounder had found rocks and chunks of earth and the metal detector found only abandoned anchors on the bottom of the sea. It was decided to continue the search later if local residents came up with any new information on search sites.

On Wednesday the police detained two other people. One of them was Ojaranta's wife. The only thing the police would say about the other individual is that the detained person is a male.

In connection with the detainment of Ojaranta's wife a thorough search of her home was conducted. The police found, among other things, a suitcase containing clothes and books packed for Ojaranta. The police decided that Ojaranta intended to give himself up in the near future. During the search the police also found telexes sent from West Germany to Euro Industri as far as is known.

On Friday 17 July the police detained a mechanic from Helsinki.

Ojaranta Makes Phone Call

Shipmaster Jukka Ojaranta called HELSINGIN SANOMAT on Tuesday 20 July after having been in hiding for 2 weeks. The shipmaster described his own role

in the incident as "ridiculously small". According to him he had been made the chief villain because of an old grudge on the part of the police.

Ojaranta stated that he was only involved in the transporting of the chemicals, and even in this primarily as an assistant. He assured us that the intent was to take care of the poisons "honestly" through a West German firm. Ojaranta stated that he had saved the telexes sent to Euro Industri by the German firm. As far as is known the police confiscated the telexes during the search of his home.

According to his own words Ojaranta would have surrendered much sooner if his "innocent" wife had not been detained. He still promised to give himself up if his wife is freed to take care of the children.

Ojaranta stated that he hid for a week in the woods outside of Kauhajoki, very close to the spot where he and Lindroos slipped away from the police.

The procurement of food was taken care of by Ojaranta's fellow fugitive, Viljo Lindroos. He went grocery shopping at a near-by market. According to Ojaranta it was Lindroos who was injured in the explosion on the Danish trawler and fled from a Swedish hospital. Lindroos suffered burns on his hands in the accident.

Ojaranta also disclosed the hiding place of the escape vehicle.

On Wednesday 21 July the police put the first two men detained in connection with this incident in jail. They are suspected of violating the waste treatment law. On the following day an Uusmaa businessman detained as the third individual for this reason was put in jail.

On Saturday Managing Director Raimo Niemela of Euro Industri was detained and a public notice placing Viljo Lindroos on the wanted list was issued.

Hazardous Waste Disposal Problem in Many Areas

Helsinki HELSINGIN SANOMAT in Finnish 25 Jul 82 p 17

[Article by Sauli Korpimo: "A Problem Shoved Into Barrels"]

[Text] Dangerous wastes, which cannot yet be treated in Finland, are lying around in industrial warehouses. Poisons thrown into the water without permission came to the surface in Dragsfjard. The environment is being polluted a thousand times over with permission.

If the barrels containing poisons had come to the surface off the coast of Dragsfjard several days earlier, the Suomen Ongelmajate [Finnish Waste Treatment] Company could now be 50 million markkas richer. This, you see, is the amount the state reduced from the assistance granted to the company as the result of a proposal made by Interior Minister Matti Ahde. The decision on state aid to the waste treatment company was made 5 days before the barrels were found.

The waste treatment company could have used the money since it is currently building a plant in Riihimäki for the disposal of toxic wastes. Currently in Finland it is not possible to make hazardous wastes safe.

On the same day that the barrels of poison were found the board of directors of the waste treatment company was deliberating an awkward situation -- it was short 50 million markkas.

Tens of thousands of people in dozens of communities have protested the construction of a waste treatment plant since they have feared pollution from the plant.

The finding of poisons in Dragsfjärd changed their attitude.

Ten days after the poisons were found, Minister Ahde flew in a helicopter to the site where the poisons were dumped. There he observed that there is still much work to be done in Finland with respect to problems of environmental protection. He said there is a need for one new environmental protection official in each province.

The barrels of poison in Dragsfjärd have more significance as a factor contributing to a change in attitudes than as a polluter of the sea. A thousand times more poisons are dumped into the environment legally. This is the easiest way to get rid of them.

But others have received permission from society to do this, not Ojaranta.

The legal pollution of waters is considerably greater than the illegal.

By the end of 1980 more than 300 industrial plants had permission to dump waste into waterways on the basis of water rights decisions or inspection statements made by officials. These wastes also included toxic substances, for example, 26,000 tons of iron, nearly 6 tons of cyanide, more than 5 tons of arsenic, more than 4 tons of lead, 600 kilos of cadmium, and 120 kilos of mercury.

Industry has been allowed to dump 7,000 tons of nitrogen, 700 tons of phosphorus, and 144 tons of oil into the waterways.

In addition to this, the waters are further polluted by pollutants from 625 municipal sewage plants.

Approximately 100,000 tons of poisonous or difficult-to-dispose-of hazardous wastes are created annually in Finland.

According to the Suomen Ongelmajäte Company, owned by the state, municipalities, and industry, 60--65 percent of the most difficult kinds of waste secretly disappears into the ground, water systems, garbage dumps, and into the air. Of the remaining only a portion can be treated in a relevant manner, the rest is lying around in industrial warehouses awaiting the completion of the hazardous waste treatment plant.

Caches

Local government officials who supervise the treatment of waste know full well that things are not what they should be, but look the other way. It is difficult for them to take on a large company when no one is able to tell the company where its hazardous waste can be dumped.

But sometimes bad luck strikes and hiding places are disclosed. Ten years ago 20 tons of cyanide waste from an affiliate of the Nokia Corporation, the Sako Company in Riihimäki, were found in a garbage dump in Hanko.

The state-owned Neste Corporation was caught red handed in 1975 when it loaded arsenic waste on the huge container ship Ensler. The intent was to dump this waste into the Atlantic, but it was finally returned to Finland accompanied by a heated international row.

Several reports have been made on the quality and amounts of hazardous wastes. The most recent and apparently the most detailed report is now being completed in the Interior Ministry. It will reveal which plants are producing poisons and where they go. The ministry is keeping the report confidential.

"Apparently, there are deficiencies in industry's waste treatment plans," stated Office Chief Matti Vehkalahti of the Interior Ministry in disclosing an issue generally known within local governments.

Environmental Protection Professor Pekka Nuorteva knows where hazardous waste not included in waste treatment plans has been taken:

"It has been taken to much smaller, unguarded dumps, for example, to locations similar to Tenhola.

The "flea meter" developed at Helsinki University Environmental Protection Institute has indicated that there may be poisons at the Tenhola dump.

The test conducted with water fleas is simple. At the laboratory filtered water from the dump is added to a dish in which water fleas are living. They die if poisons are introduced into the water.

The suitability of water fleas as a barometer of pollution was tested with water from 20 dumps. In some they lived, in others they died. Fatal water came from the dumps at Iso-Huopalahti and Tenhola, among other places.

"There is no industry producing poisons in Tenhola. The poisons were apparently brought from somewhere else. We received a clue as to the whom the party could be when the police stated that they observed on the roads of Tenhola and Bromarv a car driven by shipmaster Jukka Ojaranta, who is suspected of smuggling waste," states Nuorteva.

The poisons and their origins could be determined with certainty if the dump could be opened up.

Nuorteva doubts that anyone will become readily involved in such an expensive venture. "Indeed, the police will need more than just dead water fleas as evidence in this case."

However, the water flea test can according to Nuorteva become an inexpensive and quick procedure suitable for a preliminary report.

Professor Pekka Nuorteva, who has followed the treatment of hazardous waste for many years, fears that there are others in Finland besides Ojaranta who have disposed of hazardous waste. "General practice, however, has been that an industrial plant has paid a member of its own staff to dispose of a load of waste in a suitable place," states Nuorteva.

A Business

Also Director Leo Virkkunen of the Capital City Area Cooperation Delegation has been concerned about the treatment of waste for a long time. He is one of the promoters of the waste treatment plant, an initiator of the project.

"It was a surprise to me that such a good business could be conducted in hazardous waste," argues Virkkunen. In his opinion the waste treatment plant is, indeed, an urgent issue since the barrels in industrial warehouses are already beginning to rust -- something must be done with them soon.

In Pekka Nuorteva's opinion industry is in a hurry to dispose of the barrels for another reason also: it knows that the cost of waste disposal at the waste treatment plant will be high. The cost of dumping them into the sea is much cheaper.

"In this lies the problem. If the plant is made well, it will become expensive and treatment costs will have to be kept high. Then pressures will be created to find cheaper alternatives," states Nuorteva.

Apparently, the waste treatment plant will be made well. In any event it will be expensive. It will cost 265.6 million markkas or three times more than the estimate only a year and a half ago.

Technical Director Matti Vattulainen explains the increase in the cost by an improvement in technology. "For example, the cost of the gas refinery is now nearly half of the cost of the furnace while it originally was only one-tenth. The whole combustion plant will cost 100 million markkas, of which the mechanical portion is approximately 50 million."

Professor Pekka Nuorteva has criticized the fact that the waste treatment plant will be located in the center of an agricultural area near a city. He would consider the plant safe if it were built in a more suitable location.

"The sources and flow of ground waters in the vicinity of the construction site were not sufficiently studied. This could have prevented its construction. The Hame Provincial Government, which will issue a permit for the treatment of hazardous waste to the plant, will probably not be given the facts."

In Nuorteva's opinion the hazardous waste treatment plant is necessary; these wastes must be made safe somewhere.

In Nuorteva's opinion there is also no reason to underestimate the poison findings off the coast of Dragsfjord: "PCB is definitely detrimental to the sea since there is already a sufficient amount of it in the Baltic Sea. Each barrel is too much."

According to Nuorteva PCB is the main reason that the seal and sea eagle populations are no longer increasing.

"PCB has entered the sea from Nokia by means of the Kokemäki River. The content of PCB in the livers of burbot and codfish -- and no other fish -- caught in this vicinity is many times greater than the norms established by the World Health Organization."

In Nuorteva's opinion hypocrisy in environmental issues should be avoided and issues should be looked at as total entities. "When it becomes disclosed that a ship is dumping toxic substances into the Baltic Sea, the incident is severely condemned. On the other hand, the attitude toward a pipeline pumping poisons into the sea from Vuorikemä is completely indifferent. Is it more civilized to pump poisons into the sea along a pipeline than it is to dump barrels of poison from the side of a ship?"

10576

CSO: 5000/2146

EDF TO STUDY POWER PLANT IMPACT ON ENVIRONMENT

Paris LE MATIN in French 4 Aug 82 p 23

[Article: EDF Has Promised To Change Its Conduct"]

[Text] An agreement has been signed with the Ministries of Environment and Energy to improve landscape protection.

Did EDF [French Electric Company] decide to mend its ways? According to the agreement signed last June with the Ministries of Environment and Energy, EDF is definitely committed to adopt "an exemplary behavior" and to contribute to the protection of environment by attempting to improve the integration of all of its structures in the natural environment, for which it did not always show much consideration in the past. EDF agreed to put its cards on the table. By organizing annual meetings with all organizations concerned to discuss its surveys and research. By providing broader and more complete information under the new procedure of investigation as to public usefulness. Finally, by publishing an annual assessment of the effects which the operation of its production structures has on the environment.

As far as hydroelectric works are concerned, EDF must prepare an inventory of potential sites before the end of the year. If a project is likely to affect a national park, no study will be started without prior consultation with the ministries which signed the agreement. Also, a specialized office will be created to undertake new research on "fish passes" and, without waiting for the result of this research, a priority action program will be drawn up before the end of the year, providing for the improvement or multiplication of the existing passes.

Will EDF abide by this good behavior code? Its intentions do challenge firmly rooted habits. Whether for nuclear power plants, power lines or hydroelectric works, EDF has too often given the impression that it placed itself above the law.

Barely one year ago, one of its oldest opponents, the National Association for the Protection of Salmonids, requested Michel Crepeau minister of Environment to open an investigation on the conditions under which EDF had undertaken the realization of certain hydroelectric dams and plants.

The association--which is fighting the Puylaurent dam project (Lozere department) now being reconsidered--charged and offered proof that EDF had pressed for the realization of the project in order to place the Ministry of Environment in front of a fait accompli. In the case of Puylaurent, work had started in December 1980, without an authorization and in spite of the unfavorable opinion given by the Ministry of Environment. The same thing happened at Saint-Amandin (Cantal department) under the pretext of "surveys." And again at Ferrieres-sur-Ariege, where work started late in 1980, six months before the investigation was completed. Better still, in Brassac on the Tarn River, work was completed while the investigation was still in progress--a very slow progress, we must say--while at Eygliers a structure on the Guil, a tributary of the Durance River, was placed in service before it had even been declared of public usefulness.

"It is to be wished that the Ministry of Environment would express its opposition to these practices (often covered up by the Ministry of Industry) which call its credibility, and especially that of the public investigation procedure, into question," a ministry official estimated in a memorandum addressed to Michel Crepeau. Rather than denouncing EDF, Michel Crepeau has chosen to obtain from it a promise that it would not do it again...

9294

CSO: 5000/2157

GREECE

SCIENTISTS CHARGE POLLUTION DATA ALTERED

Athens ELEVTHEROTYPIA in Greek 2 Jul 82 p 14

[Text] Yesterday, ten scientists who recently left PAKOE [extension not available] announced the formation of an independent agency for the protection of the environment "free of any party connections and without any dependence on the government."

They once more accused the president of the center, Mr. P. Khristodoulakis that: "He alters by inflating the smog data resulting from the measurings when he makes them public."

At a press conference held yesterday noon, scientist, Mr. Thymios Dimoulas, Mrs. Dimitra Elievtheratou, Mrs. Eirini Vasilaki, Mr. Nikiforos Tsaroukhos, Mrs. Eleni Tzitzilaki, and Mr. Faidon Khatziandoniou, with proxies from Mr. V. Giannakopoulos, T. Papadopoulos and N. Koskyras stated that:

PAKOE has become an opportunistic, profit-oriented, business which under the guise of environmental protection would unhesitatingly cooperate with anyone in order to profit financially.

Its president, Mr. Khristodoulakis, PAKOE's only current member, manager and treasurer(!), alters the extent of pollution in order to create sensationalism in public opinion.

The scientists said that the subject of the environment today interests every citizen because it has become an inseparable element in his every day life.

They added that:

Their agency will be of public benefit and will be structured on similar model centers abroad.

The majority of those present at the press conference have studied at European and American universities and are familiar with the operation of these centers abroad.

Democratic dialog will dominate in the agency in dealing with problems. The participation of the scientists is free and, during the first phase, more than 100 scientists of various specializations will coopearte in all of Greece.

They reported that they have asked the responsible officials to transfer the PAKOE laboratories to a public service institution in order to be able to use them themselves.

"The property of PAKOE," they said, "was obtained with the work of many anonymous individuals who were interested in the environment. It is no one's exclusive property."

9731

CSO: 5000/5335

COMMENTARY ON POLLUTION CAUSES

Athens ELEVTHEROS KOSMOS in Greek 24 Jun 82 p 8

[Editorial: "The pollution of Saronikos"]

[Text] If all the reasons which caused in the past, and continue to cause today, the pollution of the Saronikos Gulf were hopeless, the solution of the problem would have been difficult in any case if not impossible. Because, however, as ascertained by the sanitary control commission, the basic reasons for pollution of the coastal regions of Attiki in general include the outlets of drainage conduits of wastes and the laying up of vessels, the public is demanding to know the reasons that prevent the elimination of these causes, certainly not hopeless, at least in the two cases mentioned. It is possible to stop the drainage of polluted wastes into the sea. And the coastal areas which are used for swimming by the inhabitants of the Athens basin can very well be forbidden as ships' anchorages. Instead, then, of the recent decision of the authorities of the Attikis Nome to designate certain coastal areas, Varkiza, Neon Faliron, Pakhi, Elevsina and parts of Vouliagmeni, Kavouri, and Lagonisi among them, as polluted and unfit for swimming, it would make better sense if the ministries responsible dealt with the source of the problem. We do not believe that it would be very difficult for the Ministry of the Merchant Marine specifically, to prohibit the laying up of ships in certain areas so that they will remain free for use by bathers. The harried Athenians are in need of seashore swimming areas and not of decisions by means of which they are notified that they are condemned to remain in the smog-covered capital even during the summer.

9731

CSO: 5000/5335

END